CLAIMS

What is claimed is:

1. A network for transporting power and multiplexed data and digital telephone signals, said network comprising:

first, second and third nodes;

first and second wiring segments in a building, each comprising at least two conductors for carrying at least the multiplexed data and digital telephone signals, and said at least two conductors of at least one of said segments is configured to additionally carry a power signal; and

a power consuming component connected to said at least one of said wiring segments and powered by the power signal carried by said at least one of said wiring segments

wherein:

said data and digital telephone signals are carried multiplexed over the same conductors in each of the wiring segments;

said first wiring segment connects said first and second nodes together to form, with said first and second nodes, a first packet based bi-directional communication link;

said second wiring segment connects said first and third nodes together to form, with said first and third nodes, a second packet based bi-directional communication link;

said first node contains a coupling unit coupling said first and second communication links together;

said coupling unit is one of: a repeater; a bridge; and a router;

said first node is connectable to at least one data unit for coupling the connected data unit to said coupling unit;

at least one of said nodes is connected to a remote data unit external to the building for coupling the remote data unit to at least one of said communication links;

at least one of said nodes is connected to a remote telephone service unit external to the building for coupling the remote digital telephone service signal of the remote telephone service unit to at least one of said communication links; and

at least one of said nodes is connectable to a digital telephone device for coupling the digital telephone device to the remote digital telephone service signal

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2. The network according to claim 1, wherein at least one of said nodes is at least in part included in an outlet.

3. The network according to claim 2, wherein at least one of said nodes is included in a telephone outlet.

4. The network according to claim 1, wherein at least one of the wiring segments is constituted by wiring previously installed in the building.

5. The network according to claim 1, wherein at least one of said wiring segments is constituted by telephone wiring.

6. The network according to claim 1, wherein the telephone signals are based on ISDN.

7. The network according to claim 1, wherein the power signal is carried in a frequency spectrum distinct from the data signal.

8. The network according to claim 1, wherein:

the data signals carried over at least one of said wiring segments include a plurality of time division multiplexed data channels;

said at least one data unit comprises a plurality of data units;

said first node further comprises a plurality of data connectors each operative for establishing a data signal connection with a respective one of said data units;

said data connectors are each coupled to said coupling unit; and

said first node connected to said at least one of said wiring segments is operative for coupling each of said data units to a respective, distinct data channel.

9. An apparatus for configuring a local area network in a building for the transport of power and multiplexed digital telephone and packet-based data signals across a wiring wherein the wiring includes at least first and second wiring segments each comprising at least two conductors for carrying the multiplexed digital telephone and data signals, the apparatus comprising:

first and second ports each connected to a respective one of said first and second wiring segments;

first and second modems each coupled to a respective one of said ports and operative for bi-directional packet based data signal communication with a respective one of said first and second wiring segments;

at least one data connector operative for establishing a data signal connection with at least one data unit;

a multiport unit coupling said first and second modems to said at least one data connector for data transfer between said modems and said at least one data connector, said multiport unit being constituted by one of: a repeater; a bridge; and router;

at least one digital telephone connector operative for establishing a digital telephone connection with a digital telephone device for conducting the digital telephone signal;

a data multiplexer operative for multiplexing the digital telephone signal and at least one data signal over at least one of said wiring segments; and

a power multiplexer operative for multiplexing a power signal and the data signal over at least one of said wiring segments.

10. The apparatus according to claim 9, wherein the apparatus is at least partially housed within an outlet.

11. The apparatus according to claim 9, wherein the power signal is carried in a frequency spectrum distinct from the data signal.

12. The apparatus according to claim 9, wherein:

the data signal carried over at least one of the wiring segments includes a plurality of time division multiplexed data channels;

said at least one data unit comprises a plurality of data units;

said apparatus further comprises a plurality of data connectors each operative for establishing a data signal connection with a respective one of said data units;

said data connectors are each coupled to the multiport unit; and

said apparatus is operative for coupling each of said data units to a respective, distinct data channel.

13. The apparatus according to claim 9, wherein said apparatus is attachable to a wall of a building.

14. An apparatus for configuring a local area network in a building for the transport of power and multiplexed digital telephone and packet-based data signals across a wiring

comprising at least two conductors for carrying the power and the multiplexed digital telephone and data signals, the apparatus comprising:

a wiring connector for connecting to the wiring;

a modem coupled to the wiring connector and operative for bi-directional packet based data signal communication over the wiring;

a digital telephone connector operative for establishing a digital telephone connection with a digital telephone device;

a coupler coupled to said digital telephone connector and to said wiring connector for coupling said digital telephone device to the digital telephone signal carried over the wiring; and

a power consuming component coupled to said wiring connector and powered by the power carried over said wiring.

15. The apparatus according to claim 14, wherein the apparatus is at least partially housed within an outlet.

16. The apparatus according to claim 14, wherein the power is carried in a frequency spectrum distinct from the data signal.

17. The apparatus according to claim 14, wherein:

the data signal carried over at least one of the wiring segments includes a plurality of time division multiplexed data channels;

said apparatus further comprises a plurality of data connectors each operative for establishing a data signal connection with a plurality of data units; and

said apparatus is operative for coupling each of said plurality of data units to a respective, distinct data channel.

18. The apparatus according to claim 14, wherein said apparatus is attachable to a wall of a building.